In the claims:

Applicants present all pending claims with status indicator in compliance with the practice guidelines for making amendments under 37 C.F.R. §1.121(c)(1).

1. (Previously presented) A method of inhibiting rejection of a solid organ or tissue/cellular transplant in a subject comprising:
   a) administering T cell depleted bone marrow cells to the subject before, during and/or after a solid organ or tissue/cellular-transplant;
   b) subsequently, after step (a), administering an alkylating agent to the subject in an amount that facilitates mixed hematopoietic chimerism, wherein the alkylating agent is selected from a group consisting of alkylsulfonates, nitrogen mustards, oxazaposporines, nitrosoureas, and alkylating chemotherapeutic agents;
   c) administering a second dose of T cell depleted bone marrow cells to the subject after step (b); and
   d) administering to the subject costimulatory blockade before, during and/or after the transplant, which costimulatory blockade blocks T cell costimulatory signals in the subject, and wherein the costimulatory blockade comprises a combination of a first ligand that interferes with binding of CD28 to either CD80 or CD86, and a second ligand that interferes with binding of CD154 to CD40;

   thereby inhibiting rejection of the solid organ or tissue/cellular-transplant.

2. (Original) The method of claim 1, wherein the alkylating agent is busulfan.

3. (Canceled)

4. (Canceled)

5. (Previously presented) The method of claim 1, wherein the first ligand is a soluble CTLA4 molecule.

6. (Previously presented) The method of claim 1, wherein the first ligand is a CTLA4Ig.

7-8. (Canceled)

9. (Previously presented) A method for establishing mixed hematopoietic chimerism in a subject so as to inhibit or reduce rejection of a solid organ or tissue/cellular transplant, comprising:

a) administering T cell depleted bone marrow cells to a subject having a solid organ or tissue/cellular transplant;

b) administering an alkylating agent to the subject after step (a), in an amount that facilitates mixed hematopoietic chimerism, wherein the alkylating agent is selected from a group consisting of alkylsulfonates, nitrogen mustards, oxazaposporines, nitrosoureas, and alkylating chemotherapeutic agents;

c) administering a second dose of T cell depleted bone marrow cells to the subject after step (b); and

d) administering costimulatory blockade that blocks T cell costimulatory signals in the subject before, during and/or after the transplant, wherein the costimulatory blockade comprises a combination of a first ligand that interferes with binding of CD28 to either CD80 or CD86, and a second ligand that interferes with binding of CD154 to CD40,

thereby establishing hematopoietic chimerism in the subject so as to inhibit or reduce rejection of the solid organ or tissue/cellular transplant.

10. (Original) The method of claim 9, wherein the alkylating agent is busulfan.

11. (Canceled)

12. (Previously presented) The method of claim 9, wherein the first ligand is a soluble CTLA4 molecule.

13. (Previously presented) The method of claim 9, wherein the first ligand is a CTLA4Ig.

14-29. (Canceled)

30. (Previously presented) The method of claim 1 or 9, wherein one or both of the T cell depleted bone marrow so administered is administered before the transplant and wherein the busulfan is administered within any of (a) 24 hours prior to the solid organ or tissue/cellular transplant, (b) twelve hours prior to the solid organ or tissue/cellular transplant, or (c) six hours prior to the solid organ or tissue/cellular transplant.

31-32. (Canceled)

33. (Previously presented) The method of claim 1 or 9, wherein the transplant is a skin graft.

34. (Currently amended) A method of reducing rejection of a solid organ or tissue/cellular transplant in a subject in need thereof comprising:

a) administering a first dose of T cell depleted bone marrow cells and costimulatory blockade to a subject;

b) placement of an organ or tissue/cellular transplant to the subject before, during and/or after the administration of the costimulatory blockade;

c) administering busulfan to the subject in an amount that facilitates mixed chimerism after step (a); and

d) administering a second dose of T cell depleted bone marrow cells and costimulatory blockade after step (c), wherein the costimulatory blockade is a combination of a first ligand that interferes with binding of CD28 to either CD80 or CD86, and a second ligand that interferes with binding of CD154 to CD40,

thereby reducing rejection of the solid organ or tissue/cellular transplant.

35. (Canceled)

36. (Previously presented) The method of claim 34, wherein the first ligand is a soluble CTLA4 molecule.

37. (Previously presented) The method of claim 34, wherein the first ligand is a CTLA4Ig.

38-43. (Canceled)

44. (Previously presented) The method of claim 5, 12, or 36, wherein the soluble CTLA4 molecule comprises an extracellular domain of CTLA4 which binds CD80 and/or CD86.

45. (Previously presented) The method of claim 44, wherein the extracellular domain of CTLA4 has an amino acid sequence which begins with methionine at position 27 and ends with aspartic acid at position 150 as shown in SEQ ID NO:14, or which begins with alanine at position 26 and ends with aspartic acid at position 150 as shown in SEQ ID NO:14.

46. (Previously presented) The method of claim 6, 13 or 37, wherein the CTLA4Ig comprises an amino acid sequence which begins with methionine at position 27 and ends with lysine at position 383 as shown in SEQ ID NO:14, or which begins with alanine at position 26 and ends with lysine at position 383 as shown in SEQ ID NO:14.

47. (Previously presented) The method of claim 5, 12, or 36, wherein the soluble CTLA4 molecule is a soluble CTLA4 mutant molecule that interferes with the binding of CD28 to CD80 and/or CD86.

48. (Previously presented) The method of claim 47, wherein the soluble CTLA4 mutant molecule comprises a mutated extracellular domain of CTLA4 which binds CD80 and/or CD86.

49. (Previously presented) The method of claim 48, wherein the mutated extracellular domain of CTLA4 has an amino acid sequence which begins with methionine at position 27 and ends with aspartic acid at position 150 as shown in SEQ ID NO:4, or which begins with alanine at position 26 and ends with aspartic acid at position 150 as shown in SEQ ID NO:4.

50. (Previously presented) The method of claim 47, wherein the soluble CTLA4 mutant molecule comprises an amino acid sequence which begins with methionine at position 27 and ends with lysine at position 383 as shown in SEQ ID NO:4, or which begins with alanine at position 26 and ends with lysine at position 383 as shown in SEQ ID NO:4.

51. (Previously presented) The method of claim 1, 9 or 34, wherein the second ligand is a ligand for CD40.

52. (Previously presented) The method of claim 51, wherein the ligand for CD40 is an anti-CD40 antibody or fragment thereof.

53. (Canceled)

54. (Previously presented) The method of claim 1, 9 or 34, wherein the first ligand is a soluble CTLA4 molecule and the second ligand is an anti-CD40 Ab or a fragment thereof.

55. (Currently amended) A method of inhibiting rejection of a solid organ or tissue/cellular transplant in a subject comprising

a) administering T cell depleted bone marrow cells to the subject;

b) subsequently, after step (a), administering busulfan to the subject in an amount that facilitates mixed hematopoietic chimerism;

c) administering a second dose of T cell depleted bone marrow cells to the subject after step (b); and

d) administering CTLA4Ig and an anti-CD40 antibody or fragment thereof to the subject before, during and/or after the solid organ or tissue/cellular transplant,

thereby inhibiting rejection of the solid organ or tissue/cellular transplant.

56. (Currently amended) A method of inhibiting rejection of a solid organ or tissue/cellular transplant in a subject having a transplanted tissue comprising

a) administering T cell depleted bone marrow cells to a subject;

b) subsequently, after step (a), administering busulfan to the subject in an amount that facilitates mixed hematopoietic chimerism;

c) administering a second dose of T cell depleted bone marrow cells to the subject after step (b); and

d) administering a soluble CTLA4 mutant molecule comprising an amino acid which begins with methionine at position 27 and ends with lysine at position 383 as shown in SEQ ID NO:4, or which begins with alanine at position 26 and ends with lysine at position 383 as shown in SEQ ID NO:4 and an anti-CD40 antibody or fragment thereof to the subject before, during and/or after the solid organ or tissue/cellular transplant,

thereby inhibiting rejection of the solid organ or tissue/cellular transplant.

57. (Previously presented) The method of claim 1 or 9, wherein the alkylating agent is an alkylsulfonate, wherein the alkylsulfonate is busulfan, and wherein the amount of the busulfan_that facilitates mixed hematopoietic chimerism is an amount selected from any of 4 mg/kg weight of the subject, 10 mg/kg weight of the subject, 20 mg/kg weight of the subject, 30 mg/kg weight of the subject, between 4-16 mg/kg weight of the subject, or between 0.1 to 20 mg/kg weight of the subject.

58. (Previously presented) The method of claim 34, 55, or 56, wherein the amount of busulfan that facilitates mixed hematopoietic chimerism is an amount selected from any of 4 mg/kg weight of the subject, 10 mg/kg weight of the subject, 20

mg/kg weight of the subject, 30 mg/kg weight of the subject, between 4-16 mg/kg weight of the subject, or between 0.1 to 20 mg/kg weight of the subject.

59. (Previously presented) The method of claim 1 or 9, wherein the alkylating agent is an alkylsulfonate, wherein the alkylsulfonate is busulfan, and wherein the amount of the busulfan that facilitates mixed hematopoietic chimerism is an amount below the LD_{50} dose of 136 mg/kg.

60. (Previously presented) The method of claim 34, 55, or 56, wherein the amount of busulfan that facilitates mixed hematopoietic chimerism is an amount below the LD_{50} dose of 136 mg/kg.

61. (Canceled)

62. (Previously presented) A method of reducing rejection of a solid organ or tissue/cellular transplant in a subject in need thereof comprising:

a) administering a first dose of T cell depleted bone marrow cells to the subject;

b) administering costimulatory blockade that blocks T cell costimulatory signals in the subject before, during or after the solid organ or tissue/cellular transplant;

c) administering busulfan to the subject in an amount below the LD_{50} dose of 136 mg/kg; and

d) administering a second dose of T cell depleted bone marrow cells to the subject,

thereby reducing rejection of the solid organ or tissue/cellular transplant.

63. (Previously presented) A method of inhibiting rejection of a solid organ or tissue/cellular transplant in a subject having a transplanted tissue comprising:

a) administering T cell depleted bone marrow cells to the subject;

b) subsequently administering an alkylating agent to the subject in an amount below the LD_{50} dose of 136 mg/kg, wherein the alkylating agent is selected from a group consisting of alkylsulfonates, nitrogen mustards, oxazaposporines, nitrosoureas, and alkylating chemotherapeutic agents;

c) administering a second dose of T cell depleted bone marrow cells to the subject; and

d) administering to the subject costimulatory blockade that blocks T cell costimulatory signals in the subject before, during or after the transplant.

64. (Previously presented) The method of claim 1, 9, or 63, wherein the alkylsulfonate is selected from a group consisting of busulfan, alkyl p-toluenesulfonates, alkyltrifluoromethanesulfonates, p-bromophenylsulfonates, and alkylarylsulfonates; wherein the nitrogen mustard is selected from a group consisting of mechlorethamines, chlorambucil, melphalan, and uracil mustard; wherein the oxazaposporine is selected from a group consisting of cyclosphosphamide, perfosfamide, and trophosphamide; and wherein the alkylating chemotherapeutic agents is selected from a group consisting of carmustine, cisplatin, lomustine, procarbazine, thiotepa, uracil mustard, triethylenemelamine, pipobroman, streptozocin, ifosfamide, dacarbazine, carboplatin, and hexamethylmelamine.

65. (Previously presented) The method of claim 48, wherein the soluble CTLA4 mutant molecule is encoded by DNA deposited as ATCC number PTA-2104.

66. (Previously presented) The method of claim 48, wherein the soluble CTLA4 mutant molecule is expressed by DNA deposited as ATCC number PTA-2104.

67. (Previously presented) The method of claim 6, 13, or 37, wherein the CTLA4Ig is encoded by DNA deposited as ATCC number 68629.

68. (Previously presented) The method of claim 6, 13, or 37, wherein the CTLA4Ig is expressed by DNA deposited as ATCC number 68629.

69. (Currently amended) The method of claim 6, 13, or 37, wherein the CTLA4Ig has the amino acid sequence of a CTLA4Ig fusion protein expressed by a cell deposited as ATCC CRL-10762.

70. (Currently amended) The method of claim 6, 13, or 37, wherein the CTLA4Ig has the amino acid sequence of a CTLA4Ig fusion protein secreted by a cell deposited as ATCC Accession No. CRL-10762.

71. (Previously presented) The method of claim 48, wherein the soluble CTLA4 mutant molecule has the amino acid sequence of a soluble CTLA4 mutant molecule expressed by a cell having DNA of SEQ ID NO:3 beginning with guanine at position 76 and ending with adenine at position 1149.

72. (Previously presented) The method of claim 48, wherein the soluble CTLA4 mutant molecule has the amino acid sequence of a soluble CTLA4 mutant molecule secreted by a cell having DNA of SEQ ID NO:3 beginning with guanine at position 76 and ending with adenine at position 1149.

73. (Previously presented) The method of claim 6, 13, or 37, wherein the CTLA4Ig has the amino acid sequence of a CTLA4Ig fusion protein expressed by a cell having DNA of SEQ ID NO:13 beginning with guanine at position 76 and ending with adenine at position 1149.

74. (Previously presented) The method of claim 6, 13, or 37, wherein the CTLA4Ig has the amino acid sequence of a CTLA4Ig fusion protein secreted by a cell having DNA of SEQ ID NO:13 beginning with guanine at position 76 and ending with adenine at position 1149.